

RESPONSE TO COMMENTS ON RC369 – PROPOSED RULES MODIFICATION FOR EMA’S FINANCING FRAMEWORK FOR PROUREMENT OF ANCILLARY SERVICES

Submitted by	Reference	Comments	Response
Ohm Energy	Financing Framework	We recognize the importance that such ancillary services bring to the overall system. However, it is also important for the value of this service to be balanced with cost incurred. We would like to enquire on the conditions for a competitive tender and whether that has been invoked. If not, what are the requirements in place or due diligence processes to ensure that the procured service under this financing framework is managed efficiently and is cost effective?	<p>The procurement process for ancillary services stated in the existing Market Rules remains unchanged. EMC will, on behalf of PSO/EMA, procure ancillary services through either a competitive tendering process or direct negotiations with an identified licensee.</p> <p>For ancillary services where the capital expenditure (CAPEX) is funded by EMA under the Financing Framework, EMA/PSO will review the estimated CAPEX, as well as the proposed refurbishment works submitted by the ASP to verify whether such costs are reasonable and whether the proposed scope is required to enable the provision of ancillary service. EMA/PSO may also conduct cost comparison and, if the required CAPEX is more expensive than any alternative solution, EMA will not (i) proceed to fund the CAPEX and (ii) require EMC to procure the ancillary service</p> <p>Please also refer to the information paper on Financing Framework for Procurement of Ancillary Services for more details.</p>
Ohm Energy	Financing Framework	As the cost will be passed through via MEUC, it is important for retailers to be informed at least 2 years ahead of the likely impact (if any) on the current MEUC as this affects retail prices (including contracts further out) and ultimately consumers will bear such costs. In particular:	Noted that it is important to inform retailers at least 2 years ahead of the likely impact on the current MEUC. Moving forward, EMC will publish annually the estimated total quantities and costs of ancillary services plus Authority Funding Costs for the next 3 years under the proposed revised Market Rules. Please see further edits on section 8.7.1 of Chapter 5 of Market Rules.

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		<p>a) Time period in which capital cost will be recovered via MEUC. Will the incurred capital costs be recovered within a year or if not, how far out?</p> <p>b) Likely price changes to MEUC</p> <p>Will the margin and rate of return be reviewed alongside Vesting Contract since this is benchmarked to ROE for Vesting Contracts?</p>	<p>On the time period to recover the capital expenditure via MEUC, it is not expected that the capital expenditure will be recovered within a year. To mitigate the impact to consumers, the current intent is for the recovery time period to be tied to the term of the ASC which will be based on the period by which the life span of the contracted facility is extended pursuant to the refurbishment works.</p> <p>To illustrate, if the lifespan of contracted facility will be extended for another 5 years pursuant to the carrying out of the refurbishment works, the term of the ASC will be 5 years.</p> <p>EMA will review and update the margins when necessary taking into account the prevailing methodology for setting LRMC parameters.</p>
Keppel	General	<p>Can the EMA provide a long term forecast of the total cost (in S\$ million per year) that consumers will need to fund as a result of the financing framework for procurement of Ancillary Services?</p> <p>What is the breakdown of :</p> <ol style="list-style-type: none"> 1) The cost of Ancillary Services that are required as part of today's normal functioning of the power sector/transmission grid (inclusive of the additional 200MW of Fast Start); 2) The incremental cost of additional Ancillary Services that are required to manage solar intermittency; and 	<p>The purpose of having ancillary services as set out in the existing Market Rules is to ensure reliability and security of electricity supply. Accordingly, the need to procure the required ancillary service will depend on system conditions (including changes in demand and supply). Hence, it may not be possible to project the ancillary services required on a long-term basis. However, under the revision of the Market Rules, in addition to the annual publication by EMC of the quantity and costs of the ancillary service for the current year, EMC will be publishing annually the estimated total quantities and costs of ancillary services plus Authority Funding Costs for the next 3 years. Please see further edits on section 8.7.1 of Chapter 5 of Market Rules.</p> <p>For information, EMA is in the process of reviewing the requirement of new ancillary services and cost recovery methodology for such services (including services to manage solar intermittency and support large scale power import). EMA</p>

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		3) The incremental cost of additional Ancillary Services that serves as back up for power imports to Singapore.	will conduct industry consultation for any proposed modification to the Market Rules if required to allow for the procurement of such new ancillary services.
Keppel	General	<p>Can the EMA provide clarity on the process of procuring the various ancillary services from market participants?</p> <p>What is the total capacity required for each Ancillary Service and how does the EMA determine which generation asset to be deployed for each ancillary service that will result in the most cost effective solution for consumers?</p>	<p>The procurement process for ancillary service stated in the existing Market Rules remains unchanged. EMC will, on behalf of PSO/EMA, procure ancillary services through either a competitive tendering process or direct negotiations with an identified licensee.</p> <p>For ancillary services where the CAPEX is funded by EMA under the Financing Framework, EMA/PSO will review the estimated CAPEX, as well as the proposed refurbishment works submitted by the ASP to verify whether such costs are reasonable and whether the proposed scope is required to enable the provision of ancillary service. EMA/PSO may also conduct cost comparison and, if the required CAPEX is more expensive than any alternative solution, EMA will not (i) proceed to fund the CAPEX and (ii) require EMC to procure the ancillary service.</p> <p>For example, assuming the system requires fast start service for the next 5 years due to the retirement of aging fast start units, to ensure system security and enable our system to have the capacity to replenish contingency reserve after scheduled generating unit fails to deliver the dispatch quantity, EMA will need to retain such fast start units given that the building of new fast start units will take about approximately 4 years to build. EMC will call a competitive tender to procure the ancillary service if there are more aging fast start units available in the market</p>

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			than what the system needs. EMC will award the ASC to the bidder which submitted the lowest bid.
Keppel	General	What are the specific performance levels, operational parameters and standard of availability for: - Reliability Must Run - Reactive Support and Voltage Control - Fast Start	The performance and requirements of the respective ancillary services are stipulated in section 8 of System Operation Manual (SOM). EMA will update any changes in the SOM through industry consultation where necessary.
Keppel	General	Does the EMA intend to introduce a new category of Ancillary Service to provide back up for power imports to Singapore?	For information, EMA is in the process of reviewing the requirement of new ancillary services and cost recovery methodology for such services (including services to manage solar intermittency and support large scale power import). EMA will conduct industry consultation for any proposed modification to the Market Rules/SOM if required to allow for the procurement of such new ancillary services.

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Keppel	General	<p>What is the operational SOP to activate the various Ancillary Services? For generation assets that have undergone life extension to provide back up, how will these units be activated vis a vis Fast Start, spinning reserves, open cycle gas turbines etc?</p> <p>Is the EMA or the ASP the party responsible for making fuel (ie natural gas) available to run these back up units? How will fuel costs be audited and pass through to consumers?</p>	<p>To clarify, spinning reserves (including primary and contingency reserves) are required to be bid/offered to the market for dispatch under the existing Market Rules.</p> <p>For fast start ancillary service, PSO will activate the contracted facility under the following conditions:</p> <ul style="list-style-type: none"> a) where any forced outage of generating unit and reserve falls below the level required to cover forced outage of the remaining generating unit with the largest output level; b) where there is a failure to start-up or delayed synchronisation of a generating unit, as scheduled by the Market Clearing Engine earlier, and the reserve falls below the level required to cover forced outage of the generating unit with the largest output level. <p>The above is stated in the System Operation Manual.</p> <p>An ASP is responsible to secure fuel contract and entitled to recover the fuel cost if the contracted facility is activated by PSO.</p>
Keppel	General	Will ASPs be allowed to provide multiple Ancillary Services under a single Generation Registered Facility (GRF) if the GRF is technically capable of providing multiple Ancillary Services?	One generating unit can only enter into one type of ASC.

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Keppel	Section 8.2B of Chapter 5 of Market Rules	<p>How will the fixed costs for the ancillary service contract payments be computed? Will these fixed costs come with escalation?</p> <p>What is the process for an ASP to be reimbursed for unplanned CAPEX that may occur during the term of the ancillary service?</p>	<p>With EMA financing the capital expenditure (CAPEX) under the ASFA, the ASP will be entitled to payment of ancillary service fees under the ASC to cover the following costs:</p> <p>a) OPEX required for the provision of the ancillary service with a margin to compensate the ASP for providing working capital; and</p> <p>b) Depreciation of sunk fixed assets (including land, existing generating unit(s) facility) funded by the ASP previously and are required for providing the ancillary service, and a rate of return to compensate the ASP for the opportunity cost of capital.</p> <p>The allowable margin and rate of return referred to above will be capped at 10% based on current benchmarked Return on Equity for vesting contracts.</p> <p>The ASP will also be compensated for cost of fuel consumed by the contracted facility or generating unit if activated by the PSO.</p> <p>Please also refer to the information paper on Financing Framework for Procurement of Ancillary Service.</p> <p>The process and the conditions for an ASP to be reimbursed for any unplanned CAPEX (beyond the agreed fixed or capped amount) will be set out in the ancillary service funding agreement which is to be agreed between the EMA and ASP.</p>

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Keppel	Section 8.2D of Chapter 5 of Market Rules	Keppel request that with the introduction of the new Financing Framework, EMA should recover Ancillary Service Contracts payments as a new separate market charge instead of under MEUC. This is to provide greater transparency and clarity for consumers.	<p>The purpose of ancillary service is to enable PSO to maintain the reliability of power system to benefit the consumers. Under the existing Market Rules, EMC shall recover the procurement costs of ancillary services through MEUC collection and publishes such costs annually. EMA is of the view that the existing arrangement is fair and transparent and should be extended to apply to the ancillary services procured under the new Financing Framework. As such, EMA does not see a need to introduce a separate market charge for EMA to recover the Authority funding costs financed by EMA.</p> <p>The Market Rules will be amended to require EMC to publish annually the estimated total quantities and costs of the ancillary services plus Authority funding costs for the next 3 years to enhance transparency. Please see further amendments to section 8.7.1 of Chapter 5 of Market Rules.</p>
Keppel	Section 8.3.1.1 of Chapter 5 of Market Rules	From the proposed changes to allow ancillary service contracts to be longer than 1 year, will the current Black Start ancillary service contract currently held with Gencos be revised to be multi-year?	Term of any new ASC which is concluded at or about the same time as an ancillary service funding agreement with EMA will be more than a year. No revision will be made to the term of existing Black Start ASC which has already been executed.
Keppel	Section 8.7.1 of Chapter 5 of Market Rules	Keppel suggests that EMA to provide estimates of the cost recovery for the next 3 years. This is to also be aligned with the 3 year projection of PSO's budgets and fees and to provide Gencos some clarity on future cost projections.	Please see further amendments to section 8.7.1 of Chapter 5 of Market Rules. EMA will provide the estimated Authority Funding Costs for the next 3 years to EMC for annual publication under the revised Market Rules.

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Keppel	Section 4.1.1 of Chapter 7 of Market Rules	Can the EMA indicate when the new cost recovery mechanism for ancillary service contracts will begin? When are consumers expected to make the first payment under the cost recovery mechanism	EMA is negotiating with a Genco to procure fast start service under the new Financing Framework. It is currently projected that the provision of such service will commence sometime in the second half of 2023 and EMC will on behalf of EMA commence recovery of the Authority Funding Costs by EMA upon commencement of such service. Note that this is only a projected timeline – the timeline will vary depending on amongst others when the refurbishment work will be completed.
Senoko Energy	Section 8.2B.1.9 of Chapter 5 of Market Rules	<p>The proposed step-in rights to take possession of the registered facility might not be in line with current agreements between Gencos and their respective lenders.</p> <p>Further details on step in rights must be shared as this could impact the securities and assignments that Gencos have provided to its lenders under its financing documents.</p>	Step-in right is one of the remedies that EMA may exercise to ensure continued provision of ancillary service in the event of a default of the ASP. To clarify, the exercise of the step-in right by EMA does not transfer or assign any ownership of the contracted facility to EMA. The ownership of the contracted facility shall at all times remain vested in the ASP. To avoid doubt, this will be spelt out in the ASFA. Furthermore, terms of the ASFA will be discussed with ASP.
Senoko Energy	Section 8.2B.2 of Chapter 5 of Market Rules	<p>Our understanding is that the Ancillary Service Provider (ASP) could fund their unit's refurbishment via an Ancillary Service Funding Agreement (ASFA).</p> <p>Post refurbishment, the unit will have to be successful in its verification test, only then the ASP will enter into an Ancillary Service Contract (ASC) with the authority.</p> <p>With the ability to concurrently enter into the ASFA and ASC, can we get confirmation that the ASP's obligation under the ASC shall not come into effect until the verification test is completed successfully or</p>	<p>To clarify, the ASP is allowed to finance any new CAPEX if the ASP is able to obtain financing at the same costs as or at costs lower than EMA's costs of financing. In such a case, the ASP is not required to enter into the ASFA with EMA.</p> <p>Please also refer to the information paper on Financing Framework for Procurement of Ancillary Service.</p> <p>Although this clause allows the concurrent execution of the ASFA and ASC, the ASP's obligation under the ASC to commence supply of the ancillary service will only come into effect after the refurbishment work is completed and all verification tests are successful passed. Please see further amendments to sections 8.2B.2, 8.2B.4.2, 8.3.1.1 and 8.3.1.1A of Chapter 5 of Market Rules for clarity.</p>

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		<p>PSO ascertains that the Contracted Ancillary Service Resource is able to provide the Ancillary Service in accordance with the ASC and market rules.</p>	
Senoko Energy	Section 8.2A.2 of Chapter 5 of Market Rules	<p>Our understanding is that EMC is essentially the collection agent acting on behalf of the Authority.</p> <p>The set-off or deduction of ASFA liabilities from ASC payments should only be to the extent of the relevant ASC that is entered into in conjunction with that particular ASFA. There should be no set-off against other unrelated ASFA and/or ASC agreements. Each set of ASFA and ASC should be treated as one set of contractual obligations.</p>	<p>Tripartite Agreement is specific to an individual ASP and will cover any future ASCs and ASFAs entered into with the same ASP. This arrangement is to allow EMA to have a wider recourse to the payments owing to ASP under the future ASCs to enable EMA to recover liabilities owing by the ASP to EMA under future ASFAs.</p> <p>Please see further amendments to section 8.2B.4.2 of Chapter 5 of Market Rules for clarity.</p>
Senoko Energy	Sections 8.2A.3, Sections 8.2B.1.1 and 8.2B.1.4 of Chapter 5 of Market Rules	<p>The ASC provider should have the ability to decide on the land lease extension date and lease tenor as the current land lease expiry might not coincide with the requirements under the ASFA.</p>	<p>Note that land extension is only applicable for ASFA if the Authority is funding the costs of land extension as part of refurbishment cost.</p> <p>The renewal of the land lease should be done before the expiry of the current land lease term. The timelines can be set out in the ASFA since the ASFA will remain in effect until the last day of the term of the ASC.</p>

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Senoko Energy	Section 8.2B.4 of Chapter 5 of Market Rules	<p>Please refer to comments on the right to set-off or deduct ASFA Liabilities – see Senoko Energy’s comment on Section 8.2A.2.</p> <p>Our view is that in any commercial contract arrangement, there should be the ability and rights for contract termination mutually.</p> <p>Based on our current understanding, ASC contracts with a corresponding ASFA contract will be subjected to the arrangements under the tripartite agreements.</p> <p>Can we confirm that the conditions for existing ASC contracts without funding arrangements (I.E., no ASFA) will remain unchanged when the Tripartite agreements comes into effect.</p>	<p>Please see response to Senoko Energy’s comment on section 8.2A.2 of Chapter 5 of Market Rules.</p> <p>As stated in new section 8.2B.4.2, it covers any future ASFAs and future ASCs to be entered into by the ASP.</p> <p>Existing ASCs will remain unchanged when the Tripartite Agreement comes into effect.</p>
Senoko Energy	Section 8.3.1.1A of Chapter 5 of Market Rules	<p>There should be a clear distinction on the cut-off date of when the ASFA ceases, and when the ASC commences. There should not be an overlap of contractual obligations on both the ASFA and ASC contracts.</p>	<p>The two agreements involve different parties (i.e. ASFA with EMA and ASC with EMC) but are interrelated with the common objective to procure ancillary services from the ASP for a fixed period of time. There will therefore inevitably be overlapping obligations owed by ASP to EMA under the ASFA and to EMC under the ASC.</p> <p>The ASFA will continue to be in effect until the expiry of the term of the ASC and the ASFA will terminate when the ASC is terminated.</p> <p>As clarified in section 8.2B.2 of Chapter 5 of Market Rules, although the ASC will come into effect on the date of signing, the term during which the ASC will supply the ancillary service will</p>

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			only commence after the refurbishment work is completed and all verification tests are successful passed.
Energy Market Company	Section 8.2B.6 of Chapter 5 of the market rules	<p>EMC's proposed amendment to section 8.2B.6 as below:</p> <p><u>The provisions of section 8.2B.4 shall be subject to any contrary the provisions in (i) any electricity licence.; or</u></p> <p>(i) the terms of any tripartite agreement the terms of which are required by an electricity licence to be, and have been, approved by the Authority.</p> <p><u>In the event of a conflict between the terms of an electricity licence or a tripartite agreement for an ancillary service provider, the terms of the electricity licence shall prevail.</u></p>	The Tripartite Agreement and electricity licence serve different purposes. In addition, the Tripartite Agreement is a tripartite contractual arrangement between EMA, EMC and the ASP whilst the electricity licence is issued separately by EMA under the Electricity Act to the ASP and EMC. As such, EMC's proposed amendment to section 8.2B.6 is not acceptable.
Energy Market Company	Section 4.1.1.4B of Chapter 7 of the market rules	<p>EMC's proposed amendment to section 4.1.1.4B as below:</p> <p><u>the amount of compensation and/or costs that have been awarded against the EMC under any ancillary service contract, tripartite</u></p>	EMA is not agreeable to EMC's proposed edits. The original language proposed already covers any compensation and costs awarded against EMC under any of these contracts.

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		<p><u>agreement and/or the framework agreement or otherwise payable by the EMC in connection with the resolution of any disputes or appeals under, arising out of or in connection with any of these contracts (including in connection with any consolidation of proceedings or joinder to any proceedings or claims made against the EMC in connection with the exercise of any step in rights by the Authority);</u></p>	
Energy Market Company	Section 4.1.1.4C of Chapter 7 of the market rules	<p>EMC's proposed amendment to section 4.1.1.4C as below:</p> <p><u>an estimate of the costs and expenses (including legal costs and taxes) that are or may be incurred by the EMC to make any claims against, or defend any claims made by, a counterparty to any ancillary service contract, tripartite agreement and/or the framework agreement (including in connection with any consolidation of proceedings or joinder to any proceedings or costs, charges and liabilities that are or may be payable by the EMC to the Authority in connection with the exercise of any step in rights by the Authority under the tripartite agreement); and</u></p>	EMA is not agreeable to EMC's proposed edits. The original language proposed already covers any costs incurred by EMC with respect to any claims made by or against EMC. However, EMA will however revise this section to clarify that these claims are made under or in connection with any of these contracts (including any consolidation of proceedings). Please see further amendments to section 4.1.1.4C in Annex D.